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State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

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Division Director

7160

March 17, 2016

Jim Sorensen
Brown Canyon Stone Works, LLC
7684 Whileaway Road
Park City, Utah 84098

Subject: Division Directive and Fourth Review of Notice of Intention to Commence Large Mining Operations, Brown's Canyon Stone Works, LLC, Brown's Canyon Rock Quarry Mine, M/043/0021, Summit County, Utah

Dear Mr. Sorensen:

The Division of Oil, Gas and Mining has completed a review of the referenced Notice of Intention to Commence Large Mining Operations (Notice) which was received February 8, 2016. The attached comments will need to be addressed before tentative approval may be granted.

The comments are listed under the applicable Minerals Rule heading; please format your response in a similar fashion and include the location in the document where the text has been update. Please address items requested in the attached technical review.

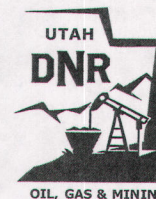
Please submit your response to this review by April 8, 2016.

The Division will suspend further review of the Notice until receiving your response to this review. Please contact the appropriate reviewer with questions about the review: Leslie Heppler (lah) at 801-538-5257, April Abate (aa) at 801-538-5214, Mike Bradley (mpb) at 801-538-5332, Lynn Kunzler (lk) at 801-538-5310, Wayne Western (whw) at 801-538-5263, or me (pbb) at 801-538-5261. Thank you for your cooperation in completing this permitting action.

Sincerely,

Paul B. Baker
Minerals Program Manager

PBB: lah: eb
Attachment: Review
cc: Summit County (SLewis@summitcounty.org)
P:\GROUPS\MINERALS\WP\M043-Summit\M0430021-BrownsCyn-StoneWorks\Final\REV4-7160-02172016.docx



Fourth Review
Page 2 of 8
M/043/0021
March 17, 2016

**Fourth REVIEW OF NOTICE OF INTENTION
TO COMMENCE LARGE MINING OPERATIONS
Jim Sorensen-Brown Canyon Stone Works, LLC
Browns Canyon Stone Works Mine
M/043/0021
March 15, 2016**

General Comments:

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 1 | | Any areas of future expansion will need to have a cultural resource survey before being disturbed (comment only; no specific response needed). | pbb | |
| 2 | Opt Cover letter | An attachment to the cover letter in response to the Division's previous comment #1 includes statements concerning operation and reclamation of certain areas. Please add this response to Section 106.4 regarding the operation plan and Section 110.2 regarding the reclamation plan. | lah | |

R647-4-105 - Maps, Drawings & Photographs

105.1 - Topographic base map, boundaries, pre-act disturbance

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 3 | Page 4 Item b. | Change "Exhibit D" to "Exhibit B, D, H and I." | lah | |
| 4 | Page 4 Item b. | Drainage control is shown on Exhibit I. Please change the text so the maps do not have to be redone. | lah | |
| 5 | Page 4 Item b. | Rock Overburden/Waste Dump Sites are not shown on Exhibit B. | lah | |
| 6 | Page 5. d. | Typo – Change to exhibit A-5. | lah | |
| 7 | Page 6 d,e,f | There are no acreage figures shown on Figure E-1; they are shown on Exhibit D. | lah | |
| 8 | Exhibit E1 | Exhibit E1 is a partial regrading map, which is fine, but a reclamation treatment map is also needed for the site. If the reclamation treatments were added to this map, it would mask the fine details of the partial regrading of the site. Please add an additional map showing the reclamation treatments. In addition, it is not known what will be done to the staging area or the area adjacent the state road. Please add cross sections through each area. | lah | |

105.2 - Surface facilities map

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
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|-----------|------------------------|----------|----------|---------------|

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|--|----------|---------------|
| 9 | Page 6 | <i>Previous comment: Text will need to be modified to match changes in the maps</i> | lah | |
| | | <i>Previous comment - All maps do not include the angle of repose slopes northwest of the equipment area, that need to be topsoiled and reseeded</i> | lah | |
| | | New comment – As requested above, a cross section through the slope will clearly show the fill to be added and will enable a volume calculation for bonding purposes. | lah | |
| 10 | Exhibits C and D | Exhibit C shows an equipment/staging area, and D has an area labeled as an equipment area. Part of this area is used for equipment, but part of it is used to store product. Please delineate these areas. | pbb | |

105.3 - Drawings or Cross Sections (slopes, roads, pads, etc.)

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|-----------|---------------|
| 11 | Figure F | There is a labeled layer from the property map that is printed on the geology base map (from exhibit G). Please turn off the layer before printing. In addition the following geologic units can be removed from the key: Qoa, Qm, Jm, Js. | lah | |
| 12 | Exhibit E | <i>Previous comment: The reclamation map is incomplete. It does not show where soils will be redistributed and revegetation will be implemented. Include acreages of these reclamation activities on the reclamation map.</i> | mpb | |
| | | <i>Reclamation treatment areas have been delineated. However, the eastern-most area next to Brown's Canyon Rd. described as "reclaimed" is not shown on the map. Also, the slopes shown on E2 aren't correct. See other comments regarding this issue.</i> | mpb | |
| | | <i>Exhibit E2 has callouts using XH:YV, but the slopes along the profile line are in 1:x.y, (V:H). Please use the requested XH:YV format for all references to slope angles. Also, please indicate on which end of the sections A and A', and B and B' are.</i> | mpb & lah | |
| | Exhibit E1 | New Comment – The previous submittal included reclamation treatment areas in response to the first round of comments. In this submittal the reclamation treatment areas have been removed and are no longer showing on this map. | mpb | |
| | | Please put the reclamation treatment areas on another base map (see comment 8 above). | lah | |

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 16 | Page 7 | <i>Previous comment : The table on page 7 needs to match Exhibits C & D.</i> | lah | |
| | Page 8 | <i>Thank you for matching table with figure. When Exhibit C and D are correct, then the table will need to be updated to match.</i> | lah | |
| | Page 8 | <i>See comments 4 and 6 above. The table on page 8 will need to be modified to include disturbance in the outslope of the pad northwest of the equipment area.</i> | pbb | |
| | Page 8 | Table on page 8 does not match the disturbance on Google Earth and previous documentation. Here is the breakdown from the Division: <ul style="list-style-type: none"> • Actual Mining - 18 acres • Northwest stockpile – 3.4 acres • Site access – 1 acre • Equipment area – 4.23 acres (in addition, part of the entire equipment area is used for mining equipment) The Division can verify with GPS equipment if necessary. | lah | |

106.4 – Nature of materials mined, waste and estimated tonnages

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 17 | Page 8 | Please revise “...as much as possible...” as it is difficult to quantify for bond calculations. | lah | |

106.8 - Depth to groundwater, extent of overburden, geologic setting

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 18 | Page 10 | <i>Previous comment : Please show the locations on the map where storm water is retained.</i> | lah | |
| | | <i>Previous comment : The text notes several location for retaining storm water, but none of the locations are shown on Exhibit I.</i> | lah | |
| | | New comment: The text on page 13 notes “see Exhibit H”, but now the requested data is shown Exhibit I. In other words, Exhibit I was been edited to add the a note where storm water is retained, and now the text notes exhibit H. | lah | |

R647-4-109 - Impact Assessment

109.1 – Projected impacts to surface & groundwater systems

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
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| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|--|----------|---------------|
| 19 | Pg. 13 | <i>Previous Comment : Please indicate on a map where the protective measures mentioned in this section are located or will be located. As an alternative to producing a new map, please provide a copy of the existing industrial stormwater permit through the Division of Water Quality that describes, in detail, protections in place and proposed to protect surface water systems.</i> | mpb | |
| | Pg. 15 & Exhibit I | <i>The only protective measures labeled on Exhibit I are 18-inch culverts. Please show check dam, berm, and other erosion control measure locations on the map. The 18-inch culverts should be shown as a dashed double line where they are installed and identified as such in the legend. Check dams, berms and other erosion control measures should also be included in the legend. The "Contour 10'" symbol (gray long dash/double short dash line) is missing from the legend.</i> | mpb | |
| | | <i>Please use standard graphic symbol for intermittent streams of a long dash/three dots (in AutoCAD, it's linetype ISO06W100, in ArcMap, it's "intermittent stream" in the ESRI symbol set). The Division also recommends fading the background image back to about 50% to make other features more readable. The use of a solid line for the culverts is OK since they are called out.</i> | mpb | |
| 20 | Exhibit I | <i>New Comment - Previous comments are adequately addressed, but the cover sheet for this map is a duplicate of Exhibit H – Hydrology Map. Following this map in the submittal is a cover sheet for Exhibit I, but the map it covers is an 8.5x11 partial copy of the SWPPP map. Please correct.</i> | mpb | |
| | | <i>The SWPPP map is required to show surface water flow patterns using arrows, and must show both onsite stormwater collection/infiltration areas and points where concentrated surface runoff discharges to offsite locations. Please show these on this map. The disturbed area hatching should be reduced or eliminated for clarity.</i> | mpb | |
| 21 | Page 15 | <i>New Comment: Flow patterns are indicated for off-site areas, but on-site flow patterns need to be shown within the disturbed area boundary, indicating flows to the infiltration area and any discharge locations in the case that the infiltration area should exceed capacity.</i> <i>Please provide a copy of the final version of the industrial SWPPP permit issued once it becomes available for inclusion in the NOI.</i> | aa | |

109.4 – Projected impacts on slope stability, erosion control, air quality, public health and safety

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
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|-----------|------------------------|----------|----------|---------------|

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|--|----------|---------------|
| 22 | Omission | <i>Previous comment : Please include a discussion in the text about the slope stability of the pit highwall.</i> | lah | |
| | Page 18 | <i>Thank you for including a statement about highwall stabilization and public safety. Please modify the statement the statement to read “. . . process according to industry standards.”</i> | lah | |
| | | <i>New comment: Please remove “. . . during stabilization process according to practices approved by the Division of Oil, Gas, and Mining and . . .” The statement should read “Public Safety will be observed and stabilization of the site will be done according to industry standard.”</i> | lah | |

R647-4-110 - Reclamation Plan

110.2 – Reclamation of roads, highwalls, slopes, impoundments, drainages, pits, piles, shafts, adits, etc

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 23 | Page 17 b. | <i>Previous comment: More information is needed on the reclamation for the highwall, as it greatly affects bond costs.</i> | lah | |
| | | <i>As noted elsewhere, the exhibits and the text need to be consistent.</i> | lah | |
| | | <i>Previous Comment : Thank you for updating the cross section and page 17, but what is needed is the volume of earth moving that will be needed to make the proposed grade changes shown on Exhibit E2 versus the current pit shown in the bottom photo on page A-3.</i> | lah | |
| | | <i>On Exhibit E1 it is noted that the cut volume is 1,987,890 cubic yards. The reclamation cost estimate price for two million cubic yards is very expensive. Is that the intent?</i> | lah | |

110.5 - Revegetation planting program

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|------------------------|---|----------|---------------|
| 24 | | <p>The Division anticipates that revegetation of the parking area outslope will be difficult because of the weeds currently growing there and suggests including a weed control and management plan for this area. Possibilities for this plan include:</p> <ol style="list-style-type: none"> 1. Covering the area and reducing the slope with waste material and soil. The current slope has a large bank of weed seeds, and covering the slope with uncontaminated fill and soil would reduce the number of seeds that could become established. 2. Using herbicide treatments in combination with revegetation. | pbb | |

R647-4-113 – Surety

| Comment # | Sheet/Page/Map/Table # | Comments | Initials | Review Action |
|-----------|--------------------------------------|---|----------------------------------|---------------|
| 25 | | <p><i>Previous comment : As of the last inspection, there is currently enough equipment on site that there would be more than eight trips to remove equipment and debris from the site.</i></p> <p><i>New comment - Demolition sheet was not included for mining equipment.</i></p> <p>Please include a list of all structures, facilities and mining equipment that will need to be removed at the end of the mine life.</p> | <p>lah</p> <p>lah</p> <p>whw</p> | |
| 26 | 110.2 a Road Reclamation | Please show line item(s) in the bond calculations for ripping and grading secondary roads. The Division needs this to correlate the reclamation plan with the bond. | whw | |
| 27 | 110.2 b Highwall Reclamation | Please show line item(s) in the bond calculations for highwall reclamation. Cost will include backfilling against the highwalls and cutting the pit walls as needed to achieve a 2H:1V slope | whw | |
| 28 | 110.2 c | Please show line item(s) in the bond calculations for slope reclamation. Cost will include regrading slope to less than 3H:1V and cost for composted manure since that is not an item usually associated with the Division's standard seeding costs. | whw | |
| 29 | 110.2 d Waste dumps/overburden | Please show line item(s) in the bond calculations for waste dumps/overburden. Cost will include regrading slope to less than 3H:1V and cost for composted manure since that is not an item usually associated with the Division's standard seeding costs. | whw | |
| 30 | 110.2 e Pits | Please show line item(s) in the bond calculations for pit reclamation. | whw | |